

# PATENT COOPERATION TREATY

From the:  
INTERNATIONAL SEARCHING AUTHORITY

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12 JAN 2005

**F. B. RICE & CO.**

**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

F B Rice & Co  
605 Darling Street  
BALMAIN NSW 2041

Date of mailing  
(day/month/year) 12 JAN 2005

Applicant's or agent's file reference  
120748

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
**PCT/AU2004/001476**

International filing date (day/month/year)  
27 October 2004

Priority date (day/month/year)  
29 October 2003

International Patent Classification (IPC) or both national classification and IPC  
**Int. Cl. <sup>7</sup> H04K 1/00, G01B 9/02**

Applicant

**UNISEARCH LIMITED et al**

**1. This opinion contains indications relating to the following items:**

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

**2. FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

**3. For further details, see notes to Form PCT/ISA/220.**

Name and mailing address of the IPEA/AU  
**AUSTRALIAN PATENT OFFICE  
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E-mail address: pct@ipaaustralia.gov.au  
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**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

**PCT/AU2004/001476**

**Box No. I      Basis of the opinion**

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
☐ This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
☐ a sequence listing  
☐ table(s) related to the sequence listing
  - b. format of material  
☐ in written format  
☐ in computer readable form
  - c. time of filing/furnishing  
☐ contained in the international application as filed.  
☐ filed together with the international application in computer readable form.  
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/AU2004/001476

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims 1-10	YES
	Claims	NO
Inventive step (IS)	Claims 2, 9, 10	YES
	Claims 1, 3-8	NO
Industrial applicability (IA)	Claims 1-10	YES
	Claims	NO

2. Citations and explanations:

**INVENTIVE STEP (IS) claims 1, 3-8**

- WO 2003/019283 (D1)
- US 6430345 (D2)

Each of the documents D1, D2 discloses an asymmetric two-path interferometer for use in the frequency basis for quantum optical transmission of information. The interferometer includes an input beam splitter to split photons into two paths, a time delay element for introducing a differential time delay between two paths, and an output beam splitter to form two output beams. The differences between the claimed invention and each of the citations represent the technical arrangements which are well known in the art (such as the use of a Michelson interferometer instead of a Mach-Zehnder interferometer, an exact nature of the time delay element, *etc.*).